

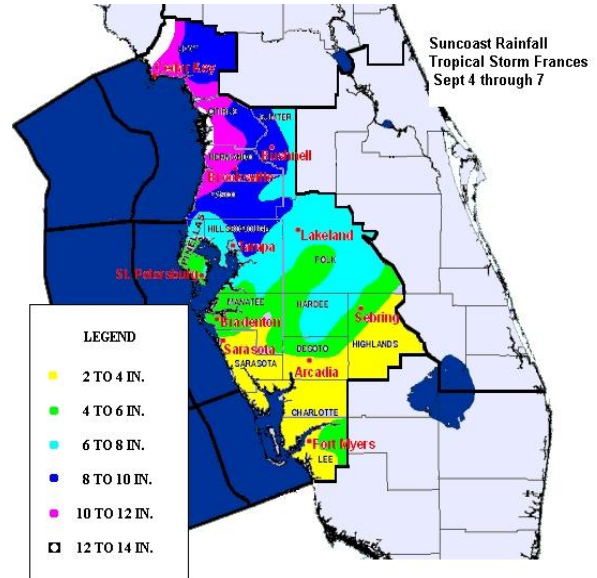
# Hurricane Frances Preliminary Storm Survey II

## West Central Florida: Water, Water Everywhere

Disclaimer: Hurricane Frances track and intensity information from our surveys are preliminary.  
Final official intensity and track will be determined by the National Hurricane Center.



Photo of River Flooding along the Alafia in Valrico, September 7, 2004.



Total rainfall for the period beginning 7 AM September 4th and ending at 7 AM September 8th. Data courtesy of NWS and the Southwest Florida Water Management District.

Unlike Hurricane Charley, which will be remembered for wind damage, Frances will be remembered most for flooding, including freshwater (overland and river) and tidal (storm surge). In West Central Florida, wind damage was largely confined to numerous large limbs and power lines being blown down. In fact, the most pronounced wind damage was noted in feeder bands during the afternoon and evening of September 4th. These bands produced concentrated minor damage to structures and trees. One such band produced measured wind gusts of 70 mph near the Pinellas/Pasco county shoreline; others produced small tornadoes in Polk County. As of this writing, no hurricane force (74 mph or greater) winds have been found on or near the Suncoast.

Still, the duration and persistence of the wind ultimately knocked out power to hundreds of thousands of Suncoast residents; statewide, outages exceeded those for Charley, with at least 3 million customers without power during the height of the storm.

There were three general types of flooding experienced by residents of West Central Florida. They are briefly detailed as follows:

- **River Flooding.** As of September 9th, virtually all rivers in west central and southwest Florida were in flood. Thus far, floods of record were reported at two gaging locations. Seven waterways reached major flood status; three were moderate with one nearing major status, and two were minor but potentially headed for moderate status. Table 1 below shows river crest levels, flood stages, and rankings as of September 9th.
- **Coastal Flooding.** After Frances eased into the Gulf near New Port Richey during the evening of September 5th, winds quickly shifted to the southwest and blew at a steady 25 to 35 mph with frequent gusts of 40 to 50 mph. These winds, which lasted around 12 hours, quickly built above normal tides, especially along south-facing shorelines. Surge values of 4 to 6 feet were reported from Cedar Key (Levy County) to Ozello (Citrus County); lesser amounts, generally 2 to 4 feet above normal, were reported farther south generally from the Pinellas coast and the Tampa and St. Petersburg shorelines through Hernando County. For some, the maximum surge arrived at low tide, producing only minor flooding. For others, such as Snell Isle in St. Petersburg, the Bayshore district of South Tampa east of Howard Avenue, and portions of downtown Tampa, moderate flooding occurred, closing several roads for much of Labor Day (September 6th).
- **Freshwater Flooding.** Areal rainfall (above) ranged from 2 to 4 inches over southwest Florida, 4 to 6 inches in Manatee and southern Pinellas County, 6 to 8 inches in Hillsborough, Hardee, and western Polk Counties, and 8 to 12 inches from Pasco County north. The heavy rains produced poor drainage and low lying area flooding in several areas generally along and north of a Tampa Bay metropolitan area to Lakeland line.

Near New Tampa, the heavy rains produced a 15 block flood near the University of South Florida, which forced road closures and the evacuation of an assisted living facility, which was temporarily condemned. In Zephyrhills (Pasco County), freshwater flooding occurred near an under construction retention pond; in Hernando County, over a dozen intersections were closed on Labor Day due to high standing water, and numerous incidences of flooding were reported in Levy County early on the 8th as feeder bands provided a parting shot while the core of Frances moved through Georgia.

River and Station	Flood Stage	Crest		Rank (Yrs. of Record)
		Stage (Ft)	Date	
Anclote R. at Elfers	20	24.44	9/7 630PM	7 (58)
Cypress Crk. at Worthington Gardens	8	13.62R	Cresting	1 (40)

Hillsborough R. at Zephyrhills	10	13.93	9/7 4AM	4 (64)
Hillsborough R. at Morris Brg.	32	34.38	9/8 815PM	1 (32)
Alafia R. at Lithia	13	22.30	9/7 1245PM	5 (71)
Peace R. at Bartow	8	10.92R	Cresting	2 (73)
Little Manatee R. at Wimauma	11	17.07	9/7 945AM	12 (65)
Peace R. at Zolfo Springs	16	22.42	9/8 445PM	5 (70)
Peace R. at Arcadia	11	16.85R	Cresting	11 (73)
Horse Crk near Arcadia	12	15.42	Cresting	17 (54)
Manatee R. at Myakka Head	12	15.94	9/6 430PM	9 (38)
Myakka R. at Myakka State Park	7	9.73R	Cresting	15 (70)

**Table 1.** Preliminary River Stage Data. "R" after the stage value means river was still cresting as of 8 AM September 10th. Number 1 rankings are flood of record.